

REMARKS

By this amendment, claims 1 and 13 have been amended. Claims 3 and 18 have been cancelled. Claim 2 was previously cancelled. Claims 4, 8, 11 and 20 were previously presented. No new matter has been added.

Claims 1, 4-17, and 19-21 remain pending in the application. Reconsideration and allowance of all of the claims is respectfully requested in view of the foregoing amendments and the following remarks.

In regard to Rejection of claim 11 Under 35 USC § 112

In the previous Office Action dated January 5, 2006, the Examiner has rejected claim 11 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In the response filed June 2, 2006, the Applicants amended claim 11 by deleting the term 'Delrin'. The Applicant respectfully submits that this rejection has been addressed and overcome by the previously presented amendment which may have been overlooked by the Examiner.

In regard to Rejection of Claims 1, 4-5, 7, 9, 11-13, 15-16, and 20 Under 35 USC § 103(a)

The Examiner has rejected claims 1, 4-5, 7, 9, 11-13, 15-16, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Obata et al. (JP2000-003705) in view of Emori et al. (JP55112114). The Applicant respectfully submits that this rejection has been addressed and overcome by the present amendment.

The Examiner's attention is directed to the following feature of claims 1 and 13 as currently amended:

"...each of said pair of working rollers having a convex cylindrical shape..."

The Applicants submit that at least the above feature of claims 1 and 13 as amended is not taught by Obata et al. Obata describes a manufacturing method comprising the steps of providing protrusions on the surfaces of back-up rolls 3 and 4 when a lithium sheet 6 is rolled

by using work rolls 1,2 and the back up rolls 3, 4; and rolling the sheet 5, while transferring shapes of the back up rolls 3, 4 onto surfaces by means of a roll with transcription of the work rolls 1, 2, to thereby form a streak on a surface of the sheet 6. The work rolls 1 and 2 illustrated and described by Obata et al. are straight cylinders.

This deficiency in Obata et al. is not remedied by Emori et al., without admitting that Emori et al. can be considered with Obata et al. and reserving the right to argue thereagainst in the future.

Emori describes a lamination apparatus having a double chock bending system in which the work rolls 1, 2, and the back up rolls 3, 4 are subject to bending in response to outputs signals received from a thickness detector 9 and a profile detector 10. The illustrated work rolls 1 and 2 as shown in Figure 2 are straight cylinders.

Therefore, at least one feature of claims 1 and 13 as amended is not taught by Obata et al. or Emori et al., alone or in combination. As such, the Examiner is requested to withdraw his rejection of amended claim 1 and claims 4-5, 7, 9, 11 and 12 depending therefrom and of amended claim 13 and claims 15-16, and 20 depending therefrom.

In regard to Rejection of Claims 3, 6, 14, and 17-19 Under 35 USC § 103(a)

The Examiner has rejected claims 3, 6, 14, and 17-19 under 35 U.S.C. § 103(a) as being unpatentable over Obata et al. (JP2000-003705) in view of Emori et al. (JP55112114) and further in view of Imai '515. The Applicants respectfully disagree.

Imai does not disclose working rollers having a convex cylindrical shape as defined in amended claims 1 and 13. Instead, Imai discloses backup rolls 3a and 4a in Figures 5, 8 and 9 having hydraulic chambers 22. The attention of the Examiner is drawn to column 3, lines 61 to 66:

“The backup rolls 3a and 4a have respectively a hydraulic chamber 22 at the central part, and by applying a hydraulic pressure to the hydraulic chamber 22, the surface profile can be changed, and this surface profile changes (expands or shrinks) in proportion to the hydraulic pressure.”

Therefore, the surface profile of backup rolls 3a and 4a can be changed with the introduction of hydraulic fluid in the chamber 22. However, the work rolls 1 and 2 illustrated in Figures 4, 5, 8 and 9 of Imai are all straight cylinders.

As described in column 3, lines 36-39 of Imai with reference to Figure 4:

“Between the journal boxes of the work rolls 1 and 2 is provided an increase bender 6, and between the journal boxes of the work rolls 1 and 2 and those of the backup rolls 3 and 4 are provided decrease benders 7 respectively. These benders have a hydraulic pressure applied so that the work rolls 1 and 2 are bent in the form of convex or concave curve by the differential pressure.”

Nowhere in the description of Imai is it mentioned or suggested that the work rolls 1 and 2 themselves have a convex cylindrical shape. Imai only describes how the work rolls 1 and 2 are bent such that their meeting surfaces form of convex or concave curve and never suggests that the work rolls 1 and 2 have a convex cylindrical shape.

Therefore, at least one feature of claims 1 and 13 as amended is not taught by Obata et al. or Emori et al., or Imai alone or in combination. As such, the Examiner is requested to withdraw his rejection of amended claims 1 and 13 which now incorporate the limitation of claims 3 and 18 respectively. Furthermore, the Examiner is requested to withdraw his rejection of claim 6 depending from amended claim 1, and of claims 14, 17 and 19 depending from amended claim 13.

In regard to Rejection of Claims 8 and 20 Under 35 USC § 103(a)

The Examiner has rejected claims 8 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Obata et al. (JP2000-003705) and Emori et al. (JP55112114) and further in view of Martt ‘913. The Applicants believe that this rejection has been addressed and overcome by the present amendment.

As previously stated, amended claims 1 and 13 now recite that “...each of said pair of working rollers having a convex cylindrical shape...”.

Martt is silent as to any of the working rolls described having a convex cylindrical shape.

Therefore, at least one feature of claims 1 and 13 as amended is not taught by Obata et al. or Emori et al., or Martt alone or in combination. As such, the Examiner is requested to withdraw his rejection of amended claim 1 and claim 8 depending therefrom and of claim 13 and claim 20 depending therefrom.

In regard to Rejection of Claims 9-10 Under 35 USC § 103(a)

The Examiner has rejected claims 9-10 under 35 U.S.C. § 103(a) as being unpatentable over Obata et al. (JP2000-003705) and Emori et al. (JP55112114) and further in view of Davenport (WO 01/97989). The Applicants believe that this rejection has been addressed and overcome by the present amendment.

As previously stated, amended claims 1 and 13 now recite that "...each of said pair of working rollers having a convex cylindrical shape..."

Davenport is silent as to any of the working rolls described having a convex cylindrical shape.

Therefore, at least one feature of claims 1 and 13 as amended is not taught by Obata et al. or Emori et al., or Davenport alone or in combination. As such, the Examiner is requested to withdraw his rejection of amended claim 1 and claims 9-10 depending therefrom.

In regard to Rejection of Claim 21 Under 35 USC § 103(a)

The Examiner has rejected claims 21 under 35 U.S.C. § 103(a) as being unpatentable over Obata et al. (JP2000-003705) and Emori et al. (JP55112114) and further in view of Rudolph '306. The Applicants believe that this rejection has been addressed and overcome by the present amendment.

As previously stated, amended claim 13 now recite that "...each of said pair of working rollers having a convex cylindrical shape..."

Rudolph is silent as to any of the working rolls described having a convex cylindrical shape.

Therefore, at least one feature of claim 13 as amended is not taught by Obata et al. or Emori et al., or Rudolph alone or in combination. As such, the Examiner is requested to withdraw his rejection of amended claim 13 and claim 21 depending therefrom.

In view of the above remarks, the Applicant respectfully submits that all of the currently pending claims are allowable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in a better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

At the time of filing of the present response, the Office was authorized to charge the fees believed to be necessary to a credit card. In case of any under- or over-payment or should any additional fee be otherwise necessary, the Office is hereby authorized to credit or debit (as the case may be) Deposit Account number 502977.

Respectfully submitted,

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